AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Currently Amended) An interference screw for cortical and cancellous bone fixation of a soft tissue graft within a bone tunnel, comprising:

a threaded body extending between a proximal end and a distal end along a central axis and being sized and configured for threadable insertion into a bone tunnel, the threaded body further comprising:

a proximal threaded section for cortical bone fixation comprising a proximal thread and having an average diameter; and

a distal threaded section for cancellous bone fixation, disposed between the proximal threaded section and the distal end, comprising a distal thread and having a constant diameter that is less than the average diameter of the proximal threaded section,

the ~~distal threaded section~~ interference screw having an overall length ~~that is greater than the length of the proximal threaded section~~ in order for the interference screw to apply force along a greater distance in the cancellous bone region compared to the cortical bone region,

the proximal and distal threaded sections being configured in order for the interference screw to apply less pressure against a soft tissue graft within the cancellous bone region compared to the cortical bone region,

the proximal end having an angle relative to the central axis in a range of about 10° to about 80°,

the proximal and distal threads having the same pitch.

2. (Previously Presented) An interference screw as defined in claim 1, further including a recess, centered on the central axis and extending from the proximal end at least partially through the interference screw, that is sized and configured to receive at least a portion of a drive shaft of a driver used to threadably insert the interference screw into a bone tunnel.

3. (Original) An interference screw as defined in claim 1, further including a tapered section disposed between the distal threaded section and the distal end that facilitates insertion of the distal end of the interference screw into a bone tunnel.

4. (Original) An interference screw as defined in claim 1, wherein the proximal threaded section is separated from the distal threaded section by a transition section.

5. (Original) An interference screw as defined in claim 4, wherein the transition section is threaded and tapered.

6. (Original) An interference screw as defined in claim 1, wherein the threaded body includes a single continuous thread of continuous pitch and helix angle extending between the proximal and distal ends, the interference screw optionally including a non-threaded portion adjacent at least one of the proximal or distal ends.

7. (Previously Presented) An interference screw as defined in claim 1, wherein the angle of the proximal end corresponds to an angle of a bone tunnel into which the interference screw is threadably inserted so that, upon threadably inserting the interference screw into a bone tunnel, the proximal end is substantially parallel to a bone surface surrounding the bone tunnel when the interference screw is oriented at an appropriate rotational angle.

8. (Previously Presented) An interference screw as defined in claim 1, wherein the proximal end has an angle relative to the central axis in a range of about 20° to about 60°.

9. (Previously Presented) An interference screw as defined in claim 1, wherein the proximal end has an angle relative to the central axis in a range of about 30° to about 40°.

10. (Previously Presented) An interference screw as defined in claim 1, wherein the proximal threaded section has a constant diameter.

11. (Previously Presented) An interference screw as defined in claim 1, wherein the proximal threaded section is at least partially tapered.

12. (Previously Presented) An interference screw as defined in claim 1, wherein the proximal threaded section of the interference screw is sized so as to lie substantially adjacent to cortical bone, and the distal threaded section is sized so as to lie substantially adjacent to cancellous bone, when the interference screw is completely inserted into a bone tunnel during use.

13. (Original) An interference screw as defined in claim 1, wherein the interference screw comprises at least one of poly-*l*-lactic acid, titanium, or stainless steel.

14. (Original) An interference screw as defined in claim 1, wherein the average diameter of the proximal threaded section is in a range of about 10 mm to about 12 mm and the average diameter of the distal threaded section is in a range of about 9 mm to about 11 mm.

15. (Original) An interference screw as defined in claim 1, wherein the average diameter of the proximal threaded section is about 1 mm greater than the average diameter of the distal threaded section.

16. (Original) An interference screw as defined in claim 1, wherein the interference screw has a length in a range of about 35-mm to about 40-mm.

17. (Currently Amended) An interference screw for cortical and cancellous bone fixation of a soft tissue graft within a bone tunnel, comprising:

a threaded body extending between a proximal end and a distal end along a central axis and being sized and configured for threadable insertion into a bone tunnel, the threaded body further comprising:

a proximal threaded section sized and configured so as to lie primarily adjacent to cortical bone when the interference screw is completely inserted into a bone tunnel, the proximal threaded section having an average diameter;

a distal threaded section sized and configured so as to lie primarily adjacent to cancellous bone when the interference screw is completely inserted into a bone tunnel, the distal threaded section having a constant diameter that is less than the average diameter of the proximal threaded section,

the ~~distal threaded section~~ interference screw having an overall length ~~that is greater than the length of the proximal threaded section~~ in order for the interference screw to apply force along a greater distance in the cancellous bone region compared to the cortical bone region,

the proximal and distal threaded sections being configured in order for the interference screw to apply less pressure against a soft tissue graft within the cancellous bone region compared to the cortical bone region;

a single continuous thread of uniform pitch extending between the proximal and distal ends; and

a tapered section disposed between the distal threaded section and the distal end that facilitates insertion of the distal end of the interference screw into a bone tunnel, wherein the tapered section is threaded.

18. (Previously Presented) An interference screw as defined in claim 17, wherein the proximal end is obliquely angled relative to the central axis so that, upon threadably inserting the interference screw into a bone tunnel formed at a predetermined angle relative to a bone surface surrounding the bone tunnel, the proximal end is substantially parallel to the bone surface when the interference screw is oriented at an appropriate rotational angle.

19. (Cancelled)

20. (Previously Presented) An interference screw as defined in claim 17, wherein the proximal threaded section is separated from the distal threaded section by a tapered transition section.

21. (Currently Amended) An interference screw for cortical and cancellous bone fixation of a soft tissue graft within a bone tunnel, comprising:

a threaded body extending between a proximal end and a distal end along a central axis and being sized and configured for threadable insertion into a bone tunnel, the threaded body further comprising:

a proximal threaded section sized and configured so as to lie primarily adjacent to cortical bone when the interference screw is completely inserted into a bone tunnel, the proximal threaded section having an average diameter that is constant throughout at least a portion of the proximal threaded section;

a distal threaded section sized and configured so as to lie primarily adjacent to cancellous bone when the interference screw is completely inserted into a bone tunnel, the distal threaded section having a constant diameter that is less than the diameter of the proximal threaded section,

the ~~distal threaded section~~ interference screw having an overall length ~~that is greater than the length of the proximal threaded section~~ in order for the interference screw to apply force along a greater distance in the cancellous bone region compared to the cortical bone region,

the proximal and distal threaded sections being configured in order for the interference screw to apply less pressure against a soft tissue graft within the cancellous bone region compared to the cortical bone region;

a single continuous thread of uniform pitch extending between the proximal and distal ends; and

a recess, extending through the threaded body from the proximal end at least partially toward the distal end, that is sized and configured to receive at least a portion of a drive shaft of a driver.

22. (Cancelled)

23. (Previously Presented) An interference screw as defined in claim 16, wherein the proximal threaded section has a length of about 5 mm.

24. (Currently Amended) An interference screw for cortical and cancellous bone fixation of a soft tissue graft ~~to~~ within a bone tunnel, comprising:

a threaded body extending between a proximal end and a distal end along a central axis and being sized and configured for threadable insertion into a bone tunnel, the threaded body further comprising:

a proximal threaded section sized and configured so as to lie primarily adjacent to cortical bone when the interference screw is completely inserted into a bone tunnel, the proximal threaded section comprising a proximal thread having an average diameter;

a distal threaded section sized and configured so as to lie primarily adjacent to cancellous bone when the interference screw is completely inserted into a bone tunnel, the distal threaded section comprising a distal thread having a constant diameter that is less than the average diameter of the proximal threaded section,

the proximal and distal threads having the same pitch,

the ~~distal threaded section~~ interference screw having an overall length ~~that is greater than the length of the proximal threaded section~~ in order for the interference screw to apply force along a greater distance in the cancellous bone region compared to the cortical bone region,

the proximal and distal threaded sections being configured in order for the interference screw to apply less pressure against a soft tissue graft within the cancellous bone region compared to the cortical bone region;

a threaded and tapered transition section disposed between the distal and proximal threaded sections and having increasing diameter from the distal threaded section to the proximal threaded section; and

a tapered end disposed between the distal threaded section and the distal end that facilitates insertion of the distal end of the interference screw into a bone tunnel.

25. (Currently Amended) A method of securing a soft tissue graft against both cortical and cancellous bone tissue within a bone tunnel, comprising:

forming a bone tunnel of constant diameter through a bone so that the bone tunnel is surrounded by a cortical bone region and a cancellous bone region;

inserting a soft tissue graft at least partially through the bone tunnel; and

threadably inserting a single interference screw comprising portions of varying diameter along the length of the interference screw into the bone tunnel in order for the interference screw to apply a greater compressive force against the soft tissue graft in the cortical bone region of the bone tunnel and a lesser compressive force against the soft tissue graft in the cancellous bone region and in order for the interference screw to apply force along a greater distance in the cancellous bone region compared to the cortical bone region.

26. (Previously Presented) An interference screw as defined in claim 17, the single continuous thread having a constant thread depth.

27. (Previously Presented) An interference screw as defined in claim 21, the single continuous thread having a constant thread depth.

28. (Previously Presented) An interference screw as defined in claim 21, the threaded body further comprising a tapered and threaded transition section between the proximal threaded section and the distal threaded section.

29. (Currently Amended) An interference screw for cortical and cancellous bone fixation of a soft tissue graft within a bone tunnel, comprising:

a threaded body extending between a proximal end and a distal end along a central axis and being sized and configured for threadable insertion into a bone tunnel, the threaded body further comprising:

a proximal threaded section sized and configured so as to lie primarily adjacent to cortical bone when the interference screw is completely inserted into a bone tunnel, the proximal threaded section having a constant diameter;

a distal threaded section sized and configured so as to lie primarily adjacent to cancellous bone when the interference screw is completely inserted into a bone tunnel,

the distal threaded section having a constant diameter that is less than the constant diameter of the proximal threaded section,

the ~~distal threaded section~~ interference screw having an overall length ~~that is greater than the length of the proximal threaded section~~ in order for the interference screw to apply force along a greater distance in the cancellous bone region compared to the cortical bone region,

the proximal and distal threaded sections being configured in order for the interference screw to apply less pressure against a soft tissue graft within the cancellous bone region compared to the cortical bone region;

a threaded and tapered transition section between the proximal threaded section and the distal threaded section; and

a single continuous thread of uniform pitch extending between the proximal and distal ends.

30. (Previously Presented) An interference screw as defined in claim 29, the single continuous thread having a constant thread depth.

31. (Previously Presented) An interference screw as defined in claim 29, the proximal end having an angle relative to the central axis in a range of about 10° to about 80°.

32. (Previously Presented) An interference screw as defined in claim 31, wherein the angle of the proximal end corresponds to an angle of a bone tunnel into which the interference screw is threadably inserted so that, upon threadably inserting the interference screw into the bone tunnel, the proximal end lies substantially parallel to a bone surface surrounding the bone tunnel when the interference screw is oriented at an appropriate rotational angle.

33. (Previously Presented) A method as defined in claim 25, wherein the interference screw comprises at least one of poly-*l*-lactic acid, titanium, or stainless steel.

34. (Currently Amended) An interference screw for cortical and cancellous bone fixation of a soft tissue graft within a bone tunnel, comprising:

a threaded body extending between a proximal end and a distal end along a central axis and being sized and configured for threadable insertion into a bone tunnel, the threaded body further comprising:

a proximal threaded section sized and configured so as to lie primarily adjacent to cortical bone when the interference screw is completely inserted into a bone tunnel, the proximal threaded section having an average diameter, the proximal threaded section terminating at said proximal end; ~~and~~

a distal threaded section sized and configured so as to lie primarily adjacent to cancellous bone when the interference screw is completely inserted into a bone tunnel, the distal threaded section having a constant diameter that is less than the average diameter of the proximal threaded section; and

a single continuous thread extending between the proximal and distal ends,

the proximal end terminating said proximal threaded section having an angle relative to the central axis in a range of about 10° to about 80°,

the proximal and distal threaded sections having the same thread pitch.